Team:
Tarun Singh
Vennela Gandluri
Rohith Sali

GitHub names:
Tarun Singh (TarunSinghD)
Vennela Gandluri (vega5334)
Rohith Sali (Rohithsali)

Project Title: Leave Management System

Project Description:
A company has a large number of employees which includes full/part time employees and contractors. To smoothly manage the leave tracking operations of the company employees and to make the process error free and faster, the management has come up with a proposal to create an on line, web based application called LMS (Leave Management System). Being an on line application, LMS can be accessed through internet round the clock and is also an environment friendly way to avoid paper based processing of employee leave data and leave approval tracking details. The new system will greatly reduce the amount of time spent in leave processing because company's present system of manual tracking is very slow.

Project Requirements

User Requirements			
ID	**Requirement**	**Topic area**	**Actor**
UR-001	As an employee, I should be able to select leave type	User account	Employee
UR-002	As an employee, I should be able to check leave balance	User account	Employee
UR-003	As an employee, I should be able to apply leave	User account	Employee
UR-004	As an employee, I should be able to login	User account	Employee
UR-005	As an employee, I should be able to view leave application status	User account	Employee
UR-006	As an employee, I should be able to cancel leave	Documentation	Employee
UR-007	As an employee, I should be able to update leave request	Documentation	Employee
UR-008	As a manager, I should be able to login	User account	Manager
UR-009	As a manager, I should be able to view leave request	User account	Manager

UR-010	As a manager, I should be able to approve leave	Documentation	Manager
UR-011	As a manager, I should be able to reject leave	Documentation	Manager
UR-012	As a HR, I should be able to login	User account	HR
UR-013	As a HR, I should be able to view leave approval	User account	HR
UR-014	As a HR, I should be able to update leave balance	Documentation	HR
UR-015	As a HR, I should be able to add employee	Documentation	HR
UR-016	As a HR, I should be able to Delete employee		
UR-017	As a HR, I should be able to view all employees	User account	HR

Business Requirements			
ID	**Requirement**	**Topic area**	**Actor**
BR-001	Username must be alphabets for registration	Authentication	HR, Employee, Manager
BR-002	Password must contain at least 6 characters	Authentication	HR, Employee, Manager
BR-003	All actors must have unique ID and name	User account	HR, Employee, Manager
BR-004	All employees must be able to apply leave	User account	HR, Employee, Manager
BR-005	All employees can select one type of leave	User account	HR, Employee, Manager

Functional requirements			
ID	**Requirement**	**Topic area**	**Actor**
FR-001	The system should mark initial status of leave applications as pending	Scheduling	System
FR-002	Access should be granted to actors who can login	Authentication	HR, Employee, Manager

FR-003	System should mark final status of leave application as completed	Scheduling	System
FR-004	As a system, all employees should be given the option to select type of leave	User account	HR, Employee, Manager

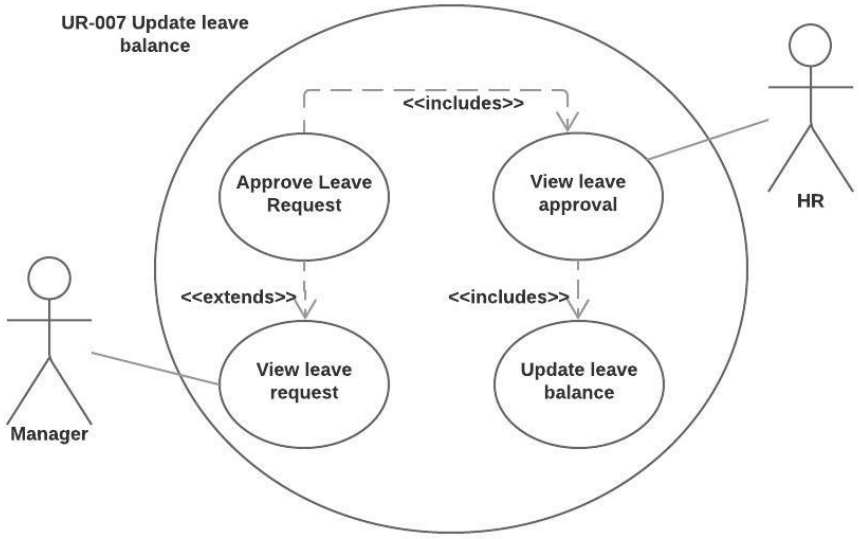
Non-Functional Requirements		
ID	**Requirement**	**Priority**
NFR-001	**Reliability** - All data must be stored in a persistent and reliable	High
NFR-002	**Security** - account information must be stored in a secure manner	High
NFR-003	**Performance** - pages should load quickly	medium
NFR-004	**Platform constraints** - Functionality of the system should be same on all the platforms (Windows/mac)	Low

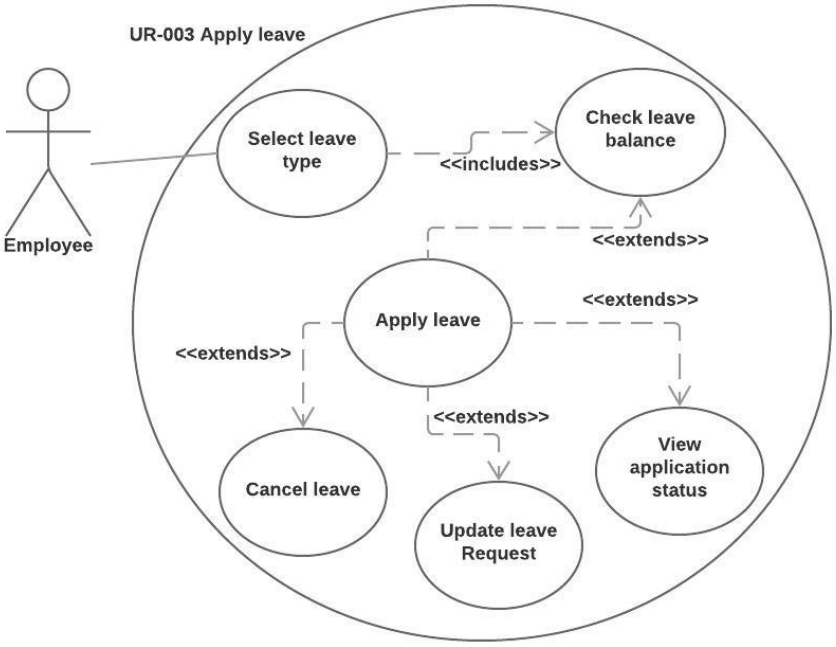
Data Storage

We will be using MySQL Database Management System for data storage in the backend.

Use case Diagram:

Use Case sub diagrams:





Use Case document:

Use Case ID:	UC-001
Use Case Name:	Apply Leave
Description:	Employee applies for leave in the system.

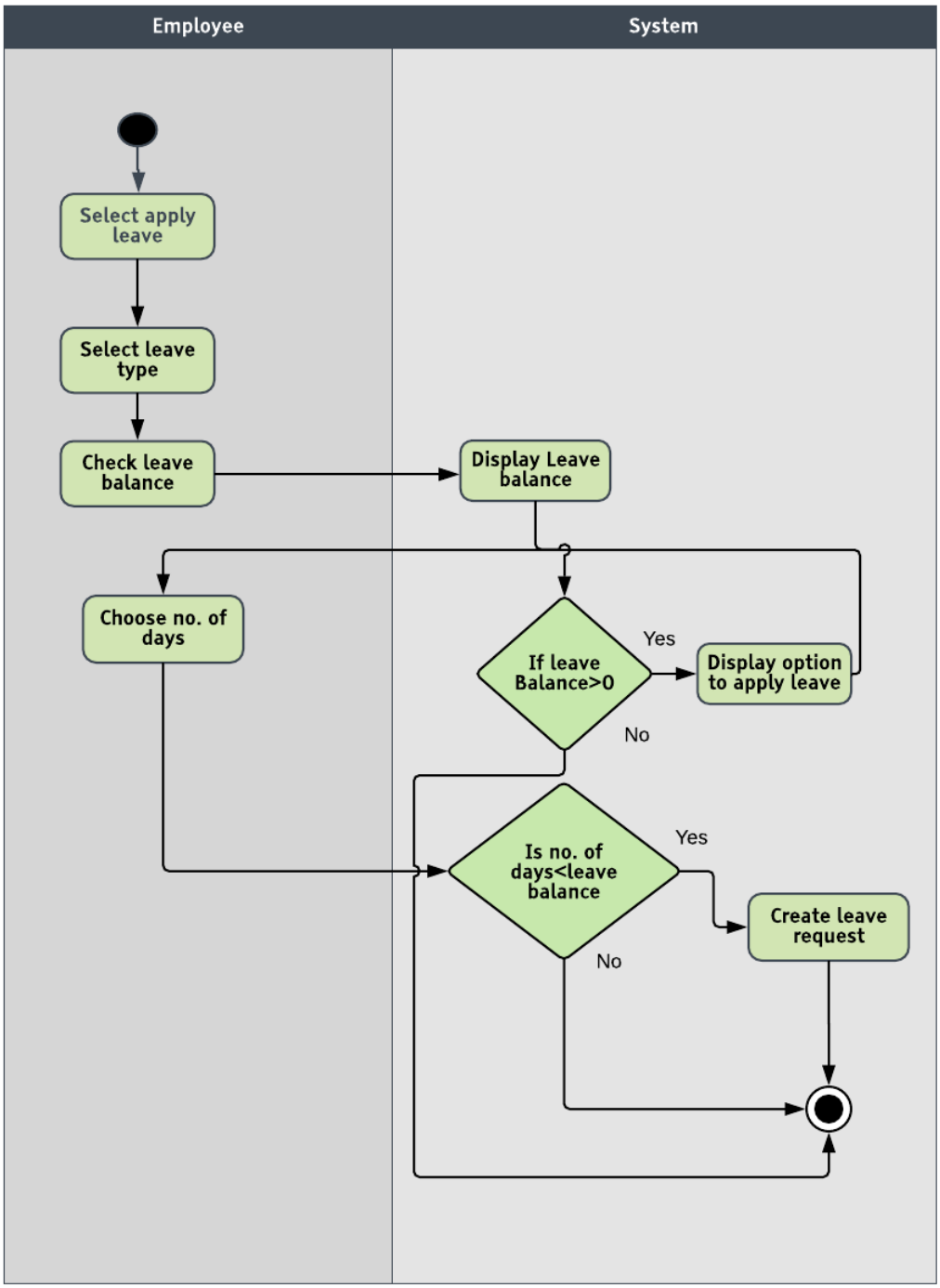
Actors:	Employee		
Pre-conditions:	Employee is logged in to the system.		
Post-conditions:	System generates leave request		
Frequency of Use:	Whenever Employee wishes to apply leave, and has sufficient leave balance to do so.		
Flow of Events:		**Employee**	**System Response**
	1	Selects Apply leave button	
	2		Displays all leave types
	3	Selects leave type	
	4		Displays leave balance and prompts user to apply leave
	5	Selects Apply leave	
	6		Prompts user to select start and end date
	7	Enters start and end date	
	8		Create leave request
Variations:	4. If leave balance is less than 1, system displays error message 6. If difference in end and start date is lesser than leave balance, display error message		
Exceptions:			
Developer Notes:			

Use Case ID:	UC-002
Use Case Name:	Approve leave request
Description:	Manager approves/ rejects new leave requests in queue

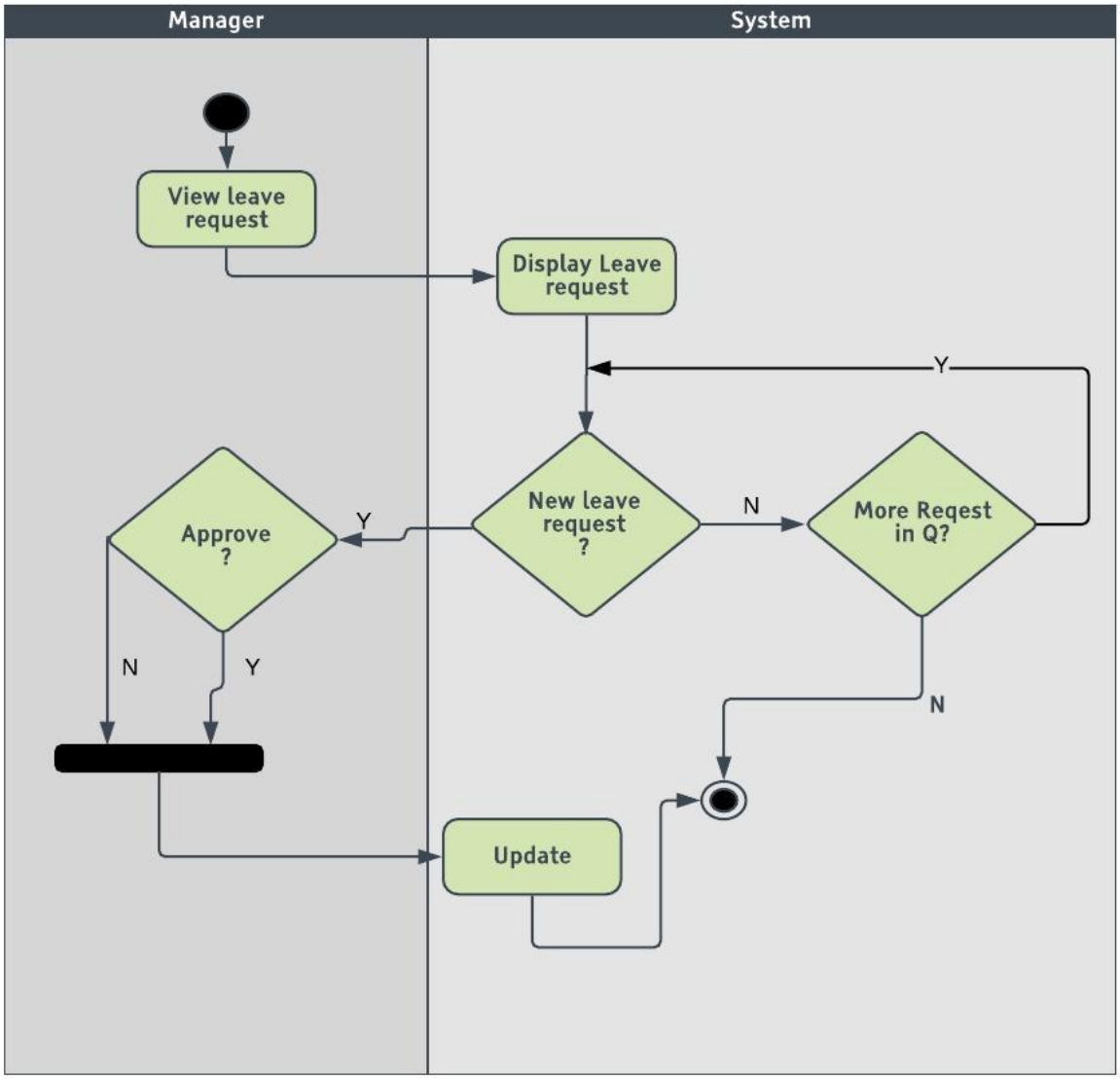
Actors:	Manager		
Pre-conditions:	Manager is logged in. Leave requests are stored in the system.		
Post-conditions:	Leave request is approved/denied. Leave application status is updated.		
Frequency of Use:	Whenever leave request is created.		
Flow of Events:		**Manager**	**System Response**
	1	Selects view leave request	
	2		Displays leave request
	3	Approves/ Denies request	
	4		Updates leave application status
Variations:	2. If leave request is not a new one and there are no more leave requests in queue, then display message.		
Exceptions:			
Developer Notes:			

Activity Diagrams

Apply Leave
Requirement ID: UR-003
Use Case ID: UC-001

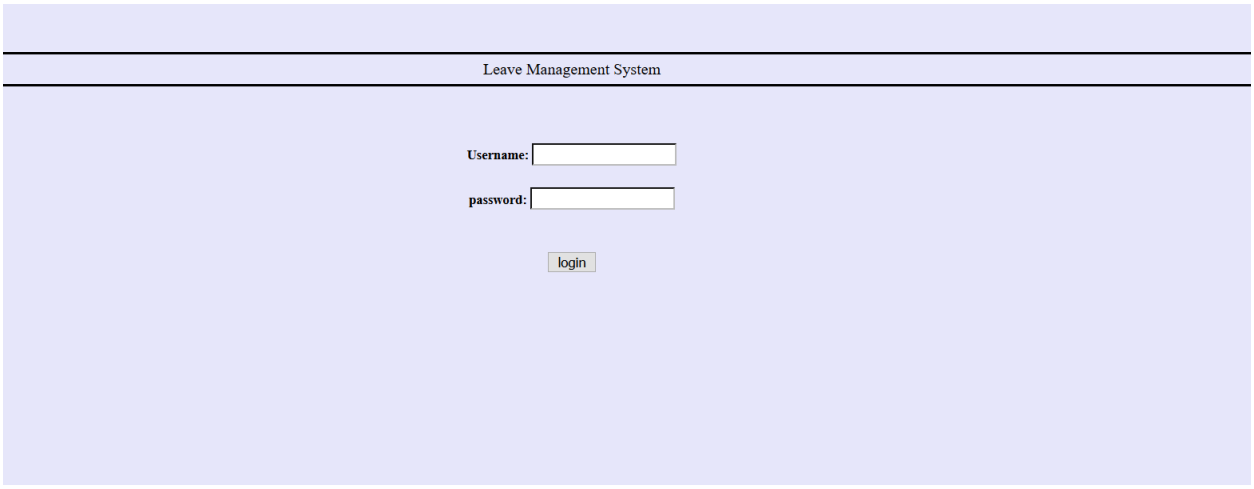


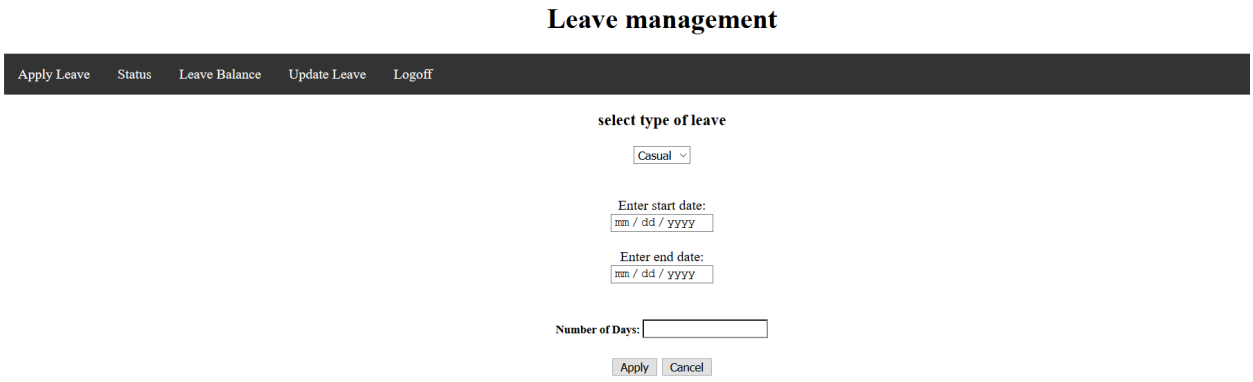
Approve leave request
Requirement ID: UR-010
UseCase ID : UC002



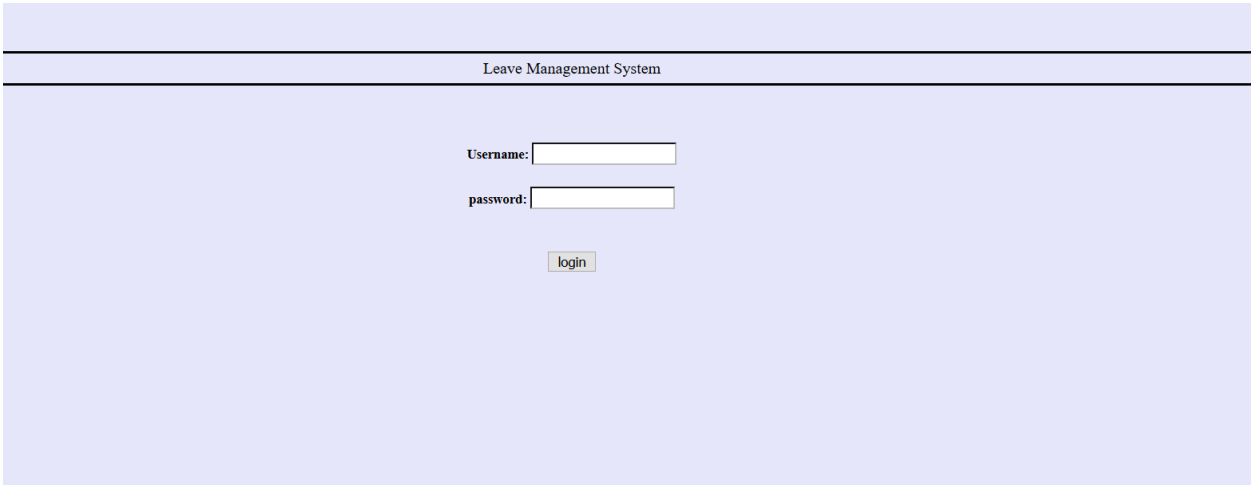
UI Mockups

1. Apply Leave:





2. Approve leave request:

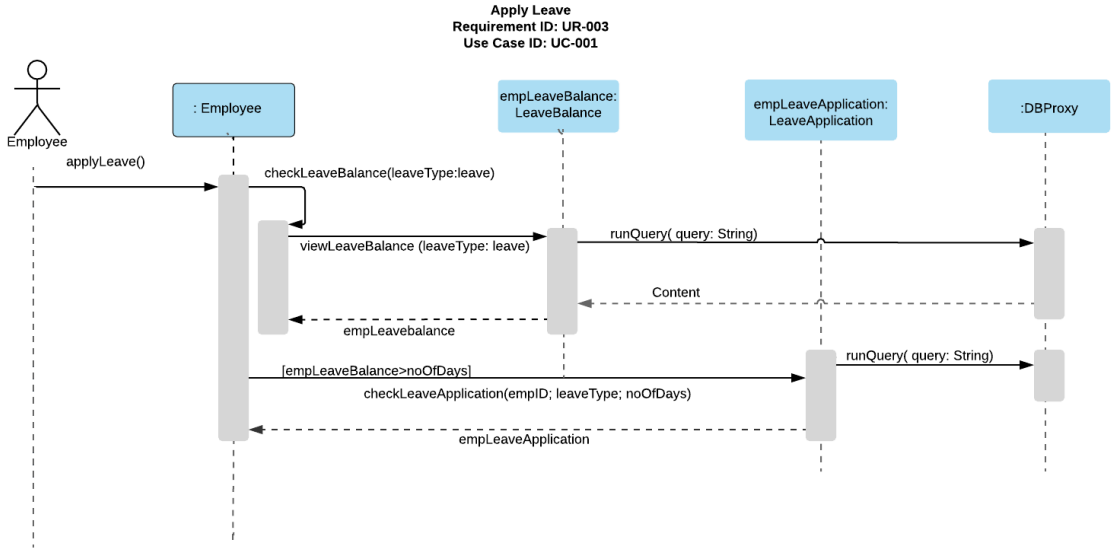


Leave management

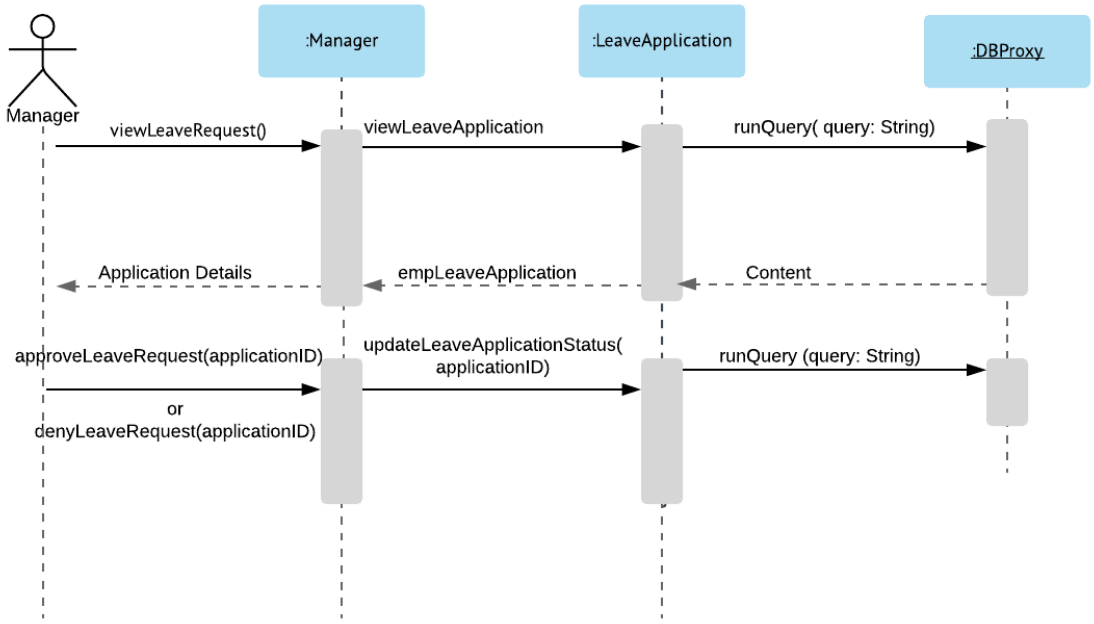
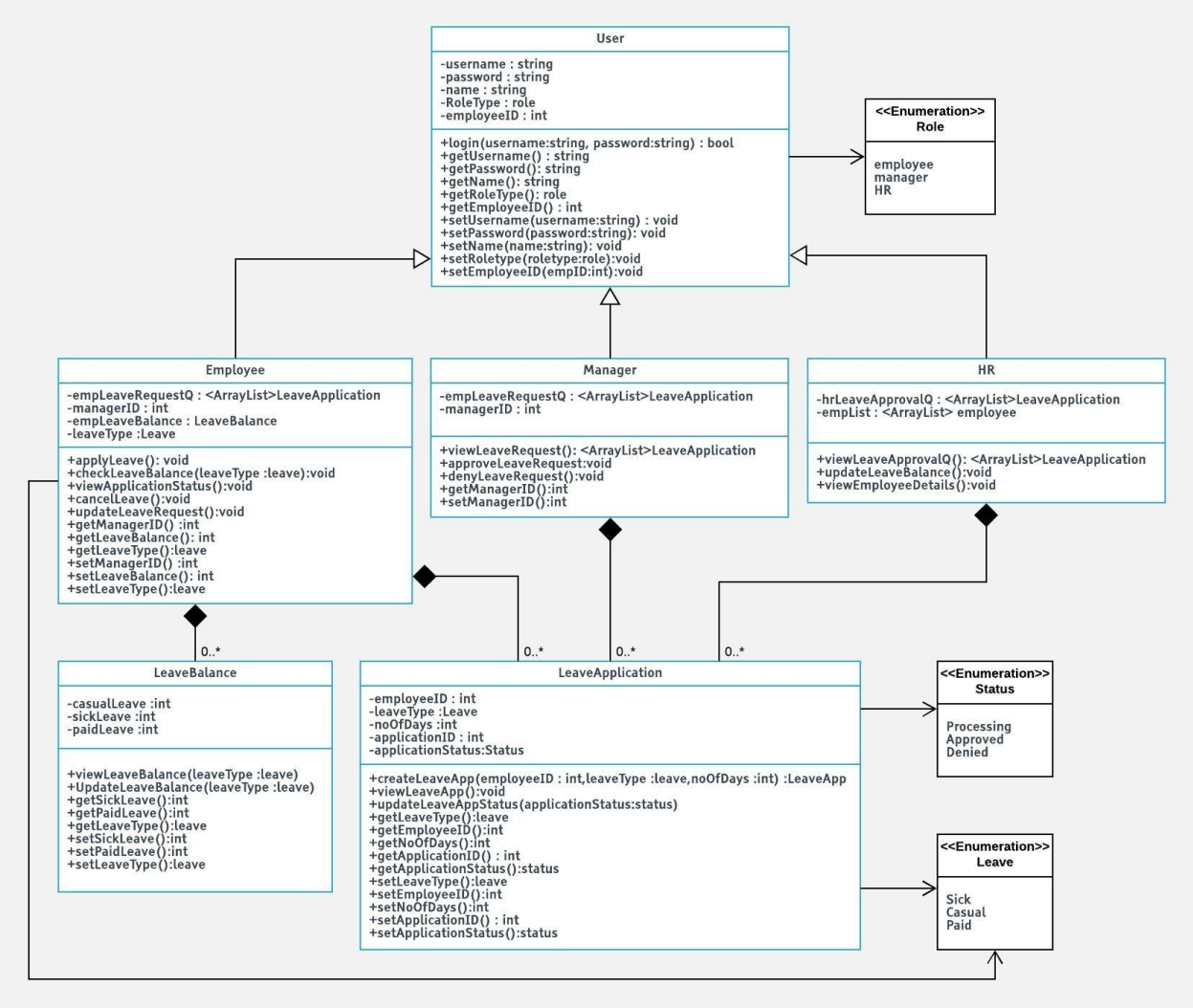
Employee ID	Name	Leave Request ID	No. of days	Start Date	End Date	Type	Status
1234	John Snow	555	5	01/20/2018	01/24/2018	sick	Pending
1236	venila	007	3	03/25/2018	01/27/2018	paid	Pending

Approve Reject

Sequence Diagrams



Apply Leave
Requirement ID: UR-010
Use Case ID: UC-002



Class Diagram